

In the Specification:

Kindly replace the numbered paragraphs set forth below as follows:

(1) [0035] Structural elements in databases are given by database indices or the addressing with the primary code or foreign code or by other organizational data for structuring and managing a database. With a hard disk, diskette or CD-ROM, e.g., the structure element are included in the FAT or in the Inode table.

(2) [0041] With the creation of the technological framework conditions for electronic publication of that kind, there arises the technical requirement of protecting such media from unauthorized access or from illegal copying so that the copyright of the supplier or provider can be effectively protected: due to the digital character of the electronically published information copying (even unauthorized) could occur without a loss of quality; therefore the question of protecting such electronic publications is an existential and fundamental code question for the public release of (digital) video, audio and print media etc. in electronic form.

(3) [0060] In accordance with a preferred development of the invention which in this respect is to be considered as the

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best mode of carrying the invention into effect the apparatus according to the invention additionally has an encoding means with which the additional data that are transmitted by way of the data network can be encoded in order on the local side further to enhance the security of usable access to the documents: an interchange of the additional data - that is to say for example the sequence or gap data - , which interchange is protected from third-party access, preferably occurs in the mode of a code agreement, which forms the basis for the encoding procedure, between the external data source and the local computer system, and it is only after local decoding of those additional data that they can be processed by the linking means to afford usable documents.

[0107]

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The document store 18 - so-to-speak the local document delivery unit - is designed in the present embodiment in the form of a local mass storage device which is directly connected to the processing unit and which already contains constituents of the document to be electronically published by way of the network. The output unit 20 forms the connection between the local computer 14 and the user and is selected in dependence on the document to be published: in the present case of publication of electronic drawings and graphics, the output unit 20 would substantially comprise a monitor which is suitable

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for the representation of such graphics, with associated data processing, while in other situations of use - for example involving the transmission of texts or additional sound as in the case of audio-visual electronic media - an acoustic output unit, a printer or the like may additionally or alternatively be connected. The input unit 22 is for example in the form of a keyboard or mouse and serves to the user for procedural control or for the input of commands for calling up the documents which are electronically published in accordance with the invention.

C5

[0108]

As a component the central processing unit 16 has a code management unit 24 with associated code storage 25, a document structure or construction module 26, a dialogue control module 28 and a clock 30. The Figure does not show a communication module which is provided for co-operation with the network 10.

C6

[0109]

In comparison, provided in the host system 12 is a code server module 32, a copyright server module 34, a billing server module 36 and - optionally and in accordance with a preferred development - a document or update server module 38.

C7

[0111]

The purpose and function of the code unit 24 (also meaning the data safeguard unit) is to provide for a code

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agreement in the data exchange with the code server module 32, that is to say to make available to the code unit 24 a unique and secret code which is safeguarded against any access and with which then the code unit can decode an item of sequence or gap information transmitted by the copyright server module 34 and prepare it for use by the document construction module 26 in the local computer: by means of that decoded item of sequence or gap information the data construction module 26 then accesses the data bank of the document store 18 and uses the item of information of the copyright server module, which is received over the network, in order to process the unordered or gappy data of the data store 18 to afford complete user data which are then made available to the user by way of the output unit 20.

08

[0119] In step S10 the integrity of the local system is then tested - therefore a test is made by means of inquiries and test procedures, to ascertain whether misuse attempts have been made in the local computer system or precautions are involved in respect thereof - the local computer system is initialized for the subsequent code and data exchange with the host system and the necessary identification and billing data with the billing server module 36 are transmitted.

[0120]

ca The subsequent code agreement in step S11 then involves the transmission of a code from the (secure) code server module 32 of the host system 12 to the local computer; the code unit 24 stores that code in the code storage 25.

[0121]

ca In step S12 the local computer then receives the encoded sequence signal, that is to say in the example shown in Figure 4 the numerical sequence 3-2-8-1-5-4-7-6, in a form which is encoded by that in accordance with the code agreement (step S11). The code in the code storage 25 then permits decoding of that sequence signal in step S13 by the code unit 24.

[0124]

ca Alternatively the method could also involve feedback connections to other earlier method stages: thus for example, in the manner shown by the arrow 44, the loop would be closed after step S16 to a location prior to the step S12 so that in this case the local system would receive a new encoded sequence over the network, for further useful data which are to be locally processed, and would decode it only prior to repeated execution of the processing procedure and display in steps S14 and S15 (step S13). As a further alternative the loop could even be closed at a location before the step S11 (arrow 46); in that case a new code agreement would be made and then the subsequent loop would be executed again.

[0149]

Another transfer of the operational

C12

instructions could be realized by a state of the art periodic or non-periodic broadcast of these individual instruction data.

These data have to be identified only by an end user program that got a registered access right to the requested electronic document by the above releasing server. The method and software of how to extract data from this public broadcast data stream could be public as well. The extraction algorithm only needs a secret session code or secret operational instructions to identify or to select only his requested instructional data. In order to be temporary off-line from a network in this manner, additional hardware has to listen for such broadcast messages.

In the Claims:

Sub D1
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1. (Twice Amended) Apparatus for protecting electronically published documents with a local computer system which can be connected locally by way of a data transmission network, to an external data source and which is adapted to call up, execute, or output the electronically published documents, wherein the local computer system comprises local data storage means which is adapted for the storage of data of the electronically published document in a form which is not usable for a user, wherein the local computer system further comprises means for receiving and processing additional protection data provided by the external data source by way of the data transmission means, as well as a linking means which is adapted to link a storage content of the local data storage means with the